

Amendments to the Claims:

The following listing of claims replaces all prior listings, and prior versions, of the claims.

Listing of Claims:

1 - 16. (cancelled)

17. (currently amended) An orientable longitudinal structure comprising:

an assembly of substantially longitudinal actuators made of shaped memory alloy;

n-doped and p-doped Peltier elements, and electric control means;

said actuators being arranged in pairs and positioned in parallel in an antagonist way opposite to each other with respect to their respective memorized shape;

each said actuator being in contact substantially at its ends with an n-doped Peltier element and a p-doped Peltier element, respectively;

each said n-doped Peltier element being in contact with a first at least partially annular conducting element and each said p-doped Peltier element being in contact with a second at least partial annular conducting element;

the assembly being mounted in series with the electric control means to form a thermoelectric circuit so that, for

a fixed direction of an applied current, one of the actuators of each said pair will heat and will undergo a flexion towards its memorized shape, and the actuator positioned in the antagonist way will cool and undergo a flexion opposite its memorized shape, and

flexing movement of said structure being transmitted between said actuators and said conducting elements.

18. (previously presented) The orientable longitudinal structure as claimed in claim 17, wherein said actuators are leaves.

19. (previously presented) The orientable longitudinal structure as claimed in claim 18, wherein said leaves are one-piece leaves.

20. (cancelled)

21. (previously presented) The orientable longitudinal structure as claimed in claim 20, wherein said conducting element is made of copper.

22. (previously presented) The orientable longitudinal structure as claimed in claim 20, wherein each said n-doped and p-doped Peltier element is welded to said conducting element.

23. (previously presented) The orientable longitudinal structure as claimed in claim 17, wherein said actuators, associated with the Peltier elements, are positioned

diametrically opposite each other with respect to a longitudinal axis of the structure.

24. (previously presented) The orientable longitudinal structure as claimed in claim 17, wherein said actuators are welded to said n-doped and p-doped Peltier elements.

25. (previously presented) The orientable longitudinal structure as claimed in claim 17, wherein said actuators are made of nickel titanium (NiTi) alloy.

26. (previously presented) The orientable longitudinal structure as claimed in claim 17, wherein said Peltier elements are made of bismuth telluride.

27. (previously presented) The orientable longitudinal structure as claimed in claim 17, further comprising epoxy resin covering said Peltier elements including thermoelectric junctions with said actuators.

28. (withdrawn) An endoscope comprising a longitudinal body having, at its distal end, a viewing system, wherein at least part of the longitudinal body is formed using at least one orientable longitudinal structure as claimed in claim 1.

29. (withdrawn) The endoscope as claimed in claim 28, wherein at least part of the longitudinal body is formed of a plurality of said orientable structures, said orientable structures being stacked on top of one another in such a way that a conducting element of one of said orientable

structures bearing the n-doped elements is adjacent to a conducting element bearing the p-doped Peltier elements of an adjacent orientable structure.

30. (withdrawn) The endoscope as claimed in claim 28, wherein the actuators of at least one orientable structure present, with the actuators of another orientable structure, deform in different directions.

31. (withdrawn) A method of manufacturing an orientable longitudinal structure as claimed in claim 18, wherein said method comprises, in succession:

preparing SMA actuators consisting in cutting leaves presenting a curved shape from a sheet of SMA, said curved shape of the leaves corresponding to a "memorized" shape;

cooling said leaves until substantially straight leaves are obtained; and

assembling said leaves obtained during the previous step with said Peltier elements, said assembly step consisting in incorporating said leaves between said n-doped and p-doped Peltier elements.

32. (withdrawn) The manufacturing method of claim 31, wherein said cutting step comprises cutting said leaves from a sheet of SMA made of NiTi.

33. (withdrawn) The manufacturing method as claimed in claim 31, further comprising assembling said Peltier

elements with partially annular conducting elements.

34. (withdrawn) The manufacturing method as claimed in claim 31, wherein the assembly steps comprising welding said leaves to said Peltier elements.

35. (withdrawn) The manufacturing method as claimed in claim 31, further comprising pouring resin to cover said Peltier elements, including thermoelectric junctions with said actuators.

36. (currently amended) A stack of orientable longitudinal structures comprising:

 a plurality of longitudinal structures,
 each said longitudinal structure being an orientable longitudinal structure comprising an assembly of substantially longitudinal actuators made of shaped memory alloy, n-doped and p-doped Peltier elements, and electric control means,

 said actuators being arranged in pairs and positioned in parallel in an antagonist way opposite to each other with respect to their respective memorized shape,

 each said actuator being in contact substantially at its ends with an n-doped Peltier element and a p-doped Peltier element, respectively, ~~and~~

each said n-doped Peltier element being in contact with a first at least partially annular conducting element and each said p-doped Peltier element being in contact with a second at least partial annular conducting element;

 the assembly being mounted in series with the electric control means to form a thermoelectric circuit so that, for

a fixed direction of an applied current, one of the actuators of each said pair will heat and will undergo a flexion towards its memorized shape, and the actuator positioned in the antagonist way will cool and undergo a flexion opposite its memorized shape, and

each of said longitudinal structures being identical and electrically connected to a previous one of said longitudinal structures or to a next one of said longitudinal structures with a possibility of orientation about a longitudinal axis of said stack,

wherein flexing movement of said structure is transmitted between said actuators and said conducting elements.

37. (previously presented) A stack of orientable longitudinal structures according to claim 36, wherein a conducting element of a structure bearing the n-doped elements is adjacent to a conducting element bearing the p-doped Peltier elements of the previous one of said longitudinal structures.